113, 824, 137.

Syria MD1

[For information on the useful plants of Iran and Iraq, many of which are also used in Syria, see 35: Hooper and Field, MA1 Iran, category 116. --Analyst]

7:Lewis S-5 (ca. 1940-45) 1948 MD1 Syria MD1

IS ONE WHERE DESERT MERGES INTO THE SOWN. THE REGION

regimen is Mediterranean in type, practically all the precipitation falling in winter, the summer being characterized by drought and great heat. In the east the rainfall is sporadic and unreliable and in most years is less in total quantity than in the west. Selemiya has a mean annual rainfall of 344 millimeters (13.5 inches). On the west-facing slopes of Jebel Bil'as rainfall is relatively heavy, though highly variable, and it permits tree growth. The present eastern limit of close agricultural settlement and of permanent unirrigated cultivation is near the 200-millimeter isohyet;[2] it was approximately the same in Romano-Byzantine times. Any further extension of agriculture to the east would mean great risk of crop failure and of increased soil erosion by wind and water.

In the cultivated west the soil is heavy and clayey, but farther to the east it is light and friable, with a high sand content and practically no humus. In Jebel Bil'as the soil is intermediate between these two types, liable to erosion by wind in summer and water in winter.

Over the greater part of the region the two main elements in the natural vegetation are low xerophilous scrub[3] and ephemeral grasses which appear in early spring and wither away in summer. The roots and rootlets of both the permanent scrub and the annual vegetation help hold the soil in place. In Jebel Bil'as these types of vegetation are well developed, and the hills are favorite spring pasture grounds for the sheep of peasants and Bedouins. Isolated trees grow in the Palmyrene ranges far to the east throughout the area within the 200-millimeter isohyet, and even just to the east of it, in country believed to have a mean annual rainfall of less than 200 millimeters (7.9 inches). On the northwestern slopes of Jebel Bil'as tree growth is more abundant. Nothing demonstrates better the positive rainfall anomaly of the hills as compared with the arid plains to the north and south.

At the present time the landscape of Jebel Bil'as is at the best parklike, the trees being scattered, except in the valleys, where clumps of three or four grow together. Few trees are taller than 20 feet. The *Pistacia* genus is represented by *P. terebinthus* (probably *P. palaestina*) and *P. vera* (the pistachio tree). The wood of these two trees, hard and slow-burning, is much valued as a fuel. Scrub oak also occurs, and in wadi bottoms thick-leaved evergreens. Shrubs and herbaceous plants are scattered everywhere.

Irrigation

The long summer drought makes irrigation necessary for most crops

[2] A full account is given by M. Zohary: Geobotanical Analysis of the Syrian Desert, *Palestine Journ. of Botany*, Jerusalem Ser., Vol. 2, 1940, pp. 46-56.

7: Lewis S-5 (ca. 1940-45) 1948 MD1 Syria MD1

ing all this great quantity of Water was past away, so that in about two Hour's Riding we could hardly perceive that there had been any Rain at all. 731

That floods are an old phenomenon in Selemiya is suggested by two traditional theories, repeated by the inhabitants today, regarding the derivation of the place name. The first theory makes the essential form Sal-Miah, "a flood of water." The other was recorded by Yaqut in 1225:

> Ahmad ibn Yahyâ ibn Jîbir relates that there was a city in Syria, near Salamiyyah, called Al Mûtafikah [The Overturned], which was overwhelmed with all its inhabitants—all except one hundred souls. These left that place, and came and built one hundred houses, and they called the hamlet where they had made their houses Salâm Miyah (Peace for the Hundred), of which the people made Salamiyyah.[23]

As told today, the story is that the "overwhelming" agent was a flood.

The floods are greatly aggravated by soil erosion. Where the trees have been cut, the bushes torn up for fuel, and the grass overgrazed, and especially where slopes have been plowed, there the soil is eroded, and many slopes are now practically bare of soil and vegetation. In summer, soil is shifted by strong winds; in winter, rain washes it into gullies or wadis with steep, crumbling sides. These are tributary to the main streams which do so much damage when they reach the plain. The runoff from bare slopes is faster and more fully loaded than that from vegetated slopes. 731 134

Past and Present Vegetation Destruction

There is no doubt that the trees of Jebel Bil'as are a remnant of a denser and more extensive growth, though there are no very good grounds for the common assumption that all the Palmyrene ranges were forested in Roman days. The Tablet of Palmyra's fiscal laws of A.D. 137[23] gives reason to suppose that the locality may have furnished considerable quantities of wood and pistachio nuts, and in the same period Jebel Bil'as and neighboring ranges were used as grazing lands for sheep and horses.[24] The location of elaborate Romano-Byzantine foggara systems, as at Moufaqqar, directly in the paths of the floods might seem to indicate that, when the foggaras were constructed, floods were not as serious as they are now. 175 137 [72]

Old stumps and roots are found within and beyond the present wooded

---

[23] Le Strange, *op. cit.*, p. 510.

[23] See J.-B. Chabot: Choix d'inscriptions de Palmyre, Paris, 1922, pp. 23-38.

[24] A. Poidebard: La trace de Rome dans le désert de Syrie.—Le limes de Trajan à la conquête arabe.—Recherches aériennes (1925-1932) (Bibliothèque Archéologique et Historique, Vol. 18), Paris, 1934; M. D. Schlumberger: Une campagne de fouilles au Djebel-el-Chaar en 1934. *Comptes Rendus de l'Acad. des Inscriptions et Belles-Lettres*, 1935, pp. 250-256. 113

7:Lewis S-5 (ca. 1940-45) 1948 MD1 Syria MD1

area. The English merchants who passed through the hills in 1678 noted that Jebel Bil'as was "covered with Trees, which, for the most Part, were the small *Pistacho*'s which the *Arabs* pickle with Salt; but eaten green, are good to quench Thirst"; and in 1691 they ascended a ridge to the east of Jebel Bil'as where the tree cover is now sparse and found it "cover'd on both Sides with great plenty of Turpentine-Trees," which grew "very thick and shady," several of them "loaded with a vast Abundance of a small round Nut."[15]

In spring, when surface water is available and the pasture is excellent, the hills are full of flocks; and several hundred thousand sheep, together with some goats and camels, pasturing each year for about three months cause much damage. Bedouin and peasant shepherd families burn vegetation on the spot, and woodcutters from Selemiya and the villages cut large amounts of the valued slow-burning pistachio wood. Vegetation has been destroyed in these ways since prehistoric times, but at certain periods the process has been quickened. Between 1914 and 1918 the Turkish authorities took great quantities of wood as fuel for the railroads. Local notables say that within living memory trees extended beyond Aquerbat; that is, several miles into the country now cultivated and treeless. The westernmost range, Jebel Shomariye, has lost all its woods, and a ridge to the east, which was "overgrown in some places" with terebinth trees in 1908,[16] is today bare. A new danger to the soil of the hills has resulted from the high grain prices now prevailing, the growing population pressure in the region, and the tendency of Arab tribes to settle down to agriculture; for now increasing areas of land on the western fringe of the hills are being plowed.

Malaria control on the plain must clearly be accompanied by soil conservation in the hills, and, ideally, both should be part of a larger scheme of regional rehabilitation. Such a scheme would cover, among other matters, irrigation, malaria control, vegetation conservation, farming practices, and grazing rights. It would mean radical changes in the region; it would require a large capital outlay; and it would necessitate government action of a scale and vigor practically unknown in Syria. It is impossible to discuss here whether such a scheme would be economically justifiable, or possible within the present social and political framework. One can only emphasize that some such comprehensive action must eventually be taken if the problems of the region are to be solved.

[15] "An Extract of the Journals" (*op. cit.*), pp. 132 and 143 [Miscellanea Curiosa, pp. 123 and 137–138].
[16] Alois Musil: Palmyrena, *Amer. Geogr. Soc. Oriental Explorations and Studies No. 4*, 1928, p. 44.

14:International Bank S-5 (1954) 1955 MD1 Syria MD1

471 immediate family. It also provided that in adjudicating title deeds in
423 which the area derived from the indicated boundaries of the property was greater than the area mentioned in the deed, the boundaries would govern at least to the extent that they gave each member of the titleholder's family a minimum of 200 hectares. The mission urges that these provisions, which have apparently not yet been applied, be enforced as rapidly as possible. Their application would inflict no undue hardship, and would increase significantly the amount of revenue-earning state domain. Above all, it would put at the government's disposal more good land to be retained as a reserve for the ultimate settlement of landless or virtually landless peasants. Much of the land now left to the state is too marginal for successful settlement.

471 Careful management of state domain is necessary to ensure that the
423 state derives from it the maximum revenue and that land not really
427 suitable for cultivation is reserved for pasture or forest. The government is not equipped at present to exercise adequate supervision. Land is often tilled without authorization, thus depriving the government of revenue and often encouraging the cultivation of land which can be expected to produce a satisfactory harvest only in years of exceptionally high rainfall. Until cultivable land is required for settlement, it should be leased, as at present, to private operators who have the necessary machinery to till it. Thus land in the Jezireh which is recaptured under the provisions of Legislative Decree No. 135 might well be leased to those who now cultivate it, so that existing units of exploitation are not disturbed until the land is needed for distribution. However, current rentals for state land, even though they have been rising in recent years, still seem unduly low. Judging from private rental arrangements prevailing in the Jezireh, for example, the state should be able to charge an average rental of at least £S 5-6 per hectare instead of only a little over £S 3 as at present. In this way the government can add to the funds available for financing development.

● *Forestry and State Domain*

137 The management of state domain should look also to the preservation
459 and improvement of forest areas on government land. Syria has unfortunately been almost entirely denuded of forests. Although some 448,000 hectares are listed officially as "forest", 348,000 hectares consist either of

14:International Bank S-5(1954)1955 MD1 Syria MD1

wholly barren land or of range land with arboreous shrubs. Of the balance probably only about 60,000 hectares can be characterized as more or less dense forest.

The mission has already recommended an aerial survey of the forest areas in the province of Latakia. This would be a first step in the appraisal of existing resources and the delimitation and protection of forest reserves. An FAO specialist has for some time been advising the government on a forestry program. The mission can only recommend that action along the lines which he has proposed be undertaken as soon as possible. Any program should focus in the first instance on safeguarding forest areas against uncontrolled cutting, shifting cultivation, excessive grazing, fire, insects, erosion and other hazards which have inflicted considerable damage in the past. A more effective forestry law which was drafted by a committee in 1953 should be promptly enacted for this purpose. To protect the forests and supervise their exploitation a field service of four foresters and 42 rangers should be built up by 1960. The necessary forest rangers will have to be trained either at a secondary forestry school which may be established in cooperation with the FAO to serve the countries in the Near East or at a special training school which might be added to the existing Bugua Agricultural School near Latakia. Within the Ministry of Agriculture a staff of five foresters and 10 rangers should be available to direct the necessary survey, research and reforestation work; and two foresters will be necessary to supervise forest nurseries.

Once adequate protection of forests has been established, reforestation can proceed. The three existing nurseries and two new ones recently established should be able to produce about 3 million seedlings yearly. The mission considers it important, however, that government nurseries be also in a position to supply trees for planting in farming areas. Although such trees as poplars are extensively grown as cash crops in certain irrigated regions, most farming areas are virtually treeless. The planting of a belt of trees around new village settlements should be an integral part of any settlement program. Farmers should be assisted to establish their own wood lots and to plant trees along roads. This would help to meet the acute shortage of timber for fuel and building, provide some protection against wind and make settlements more attractive. The mission therefore suggests that five additional small nurseries be established, particularly in the provinces of Jezireh and Euphrates, to supply trees for such purposes.

14:International Bank S-5 (1954) 1955 MD1 Syria MD1

To meet the cost of this program over the next five or six years the mission suggests that additional funds of £S 500,000 be made available to the forestry service.

Settlement of State Domain

The employment of state land for the establishment of peasant proprietors is already declared government policy. Article 22 of the 1950 constitution stipulates that "The State shall distribute among landless peasants, at a small cost to be paid by instalments, sufficient land to secure their livelihood"; and decrees issued by the Minister of Agriculture on November 1, 1952 and January 15, 1953, provide for the sale of government land in parcels of 50 or 10 hectares, depending on whether the land is irrigated.

The immediate need for settlement arises from certain localized population pressures and from the growing desire of the Bedouins to adopt agriculture. Population pressures are most marked in the provinces of Latakia and Djebel Druze where, according to rough estimates, the amount of cultivated land available per person is less than 50% and a little over 60%, respectively, of the average for Syria as a whole. The reclaimed land in the Ghab and the Roudj should help in particular to relieve the overcrowding among the agricultural population of the Alaouit mountains in Latakia. According to the Ministry of the Interior, the Bedouins number about 150,000, half of whom, however, are said already to be engaged in some form of settled agriculture. Many Bedouins apparently tend to squat on unoccupied land which they cultivate more or less sporadically and often with extremely poor results. For them the availability of good land in such a province as the Jezireh is of paramount concern.

The mission has given special attention to the problems involved in settling reclaimed and irrigated areas and of undertaking certain experimental settlements in dry-farming regions. The government has not yet drawn up settlement plans for the Ghab and the Roudj, although this task is becoming urgent, particularly for the latter. For the settlement of the Bedouins certain initial steps have been taken. The government has set aside and divided into allotments 100,000 hectares in the Radd area of the Jezireh and is in the process of dividing another area of 50,000 hectares in the same province. Part of the first area has already been allocated to Bedouins but is being leased to large operators for three years in order to

Mc Wantner 8-5 60 doh. 1948 MI Middle East
Syria MDI

POSSIBILITIES OF DEVELOPMENT

scope Both in the Jezira and in the Euphrates region there is
for widening the area cultivated and raising the yields, as the soil
241 is fertile. In the Jezira the use of machinery could be extended—
231 it is already increasing fast. Better livestock production could be
137 achieved by greater use of fodder crops for which conditions are favourable: in the 'Duck's Bill' good clover grows wild. At present fodder crops are not considered worth cultivating.

312 In the Euphrates region there is great scope for extension of irrigation. But a large scale scheme would be costly because the river runs between high escarpments, which vary in distance between each other up to about 10 miles. To irrigate much larger areas it would be necessary to lift water over the escarp-
311 ments. There are large areas of uncultivated land, particularly
312 between Abu Kemal and Deir-ez-Zor. Even on the land already
243 cultivated yields of wheat could be much higher: at present the yield is four to six times the seeding rate, and, according to local farmers, could be raised to ten to fifteen times the seed with
[43] better irrigation. The high cost of fuel oil is the limiting factor as it also is for tractor work. On the Khabur river improvement of the ancient barrages would permit an extension of irrigation.

000 It is in this area that there is real scope for a planned settlement of cultivators, with improved methods and a better system of land tenure. The obvious form for such settlement to take would be on the model of the Jewish co-operative farms, small holdings with collective use of machinery and working to a cropping plan; on the uncultivated land such settlement could be undertaken without incurring high capital costs.

So far as the Euphrates Valley is concerned, similar co-operatives based on communal control of water supplies might be started on a small scale. Large-scale irrigation here would be costly, and would necessarily have to be co-ordinated with the irrigation of Iraq. An immediate step needed is to reduce the price of fuel oil.

While it is easy on paper to see the possibilities of such schemes as these, it is not easy to see where in fact the motive power for them is to come from. They will not bring in quick big returns, which are what local farmers and landowners want: the district is remote and the main object of such investment would be a long period rise in the standard of living, in which the moneyed classes are not interested. Present-day Syria is not

Reptiles. Venomous snakes are not common, but at least 4 species of vipers are known to be present. The carpet viper, *Echis carinatus*, exists only in the north, while *Vipera lebetina lebetina*, *V. lebetina xanthina* and *V. palaestina* are reported from many parts of the country. 136

Rodents. Rats and mice are numerous. The usual domestic rats are *Rattus rattus rattus* or *R. rattus alexandrinus*. *R. norvegicus* sometimes invades the port towns of Latakia.

Mollusks.* The fresh-water snail, *Bulinus truncatus* (— *B. contortus*), inhabits some of the tributaries of the Belikh and the Khabour rivers, near the Turkish border. It is the intermediate host of *Schistosoma haematobium*, which is reported from several foci in that region. 136 164

Plants. Various trees, weeds and grasses are capable of inducing allergic manifestations in susceptible individuals, but no precise information is available. 137 752

The broad bean, *Vicia faba*, which is grown extensively as a food, may be toxic to young children when it is eaten raw. A few deaths are observed each year, among children in both urban and rural communities. Occasional cases of lathyrism occur when the "Indian pea," *Lathyrus sativus*, a plant widely cultivated for fodder, is used for human consumption. [135]

Food Sanitation

Municipal regulations govern the sanitation of the food supplies in the cities of Damascus, Aleppo, Homs, Hama and Latakia. Restaurants, markets and other premises where food is sold are inspected at regular intervals by the municipal sanitary officers, and food handlers are required to register for examination at 6-month intervals. Municipal slaughterhouses are established in towns with populations of 20,000 and over, and are operated under the supervision of the health authorities. The meat animals are inspected before and after slaughter by veterinary officers of the Min- 744

* See footnote, page 10.